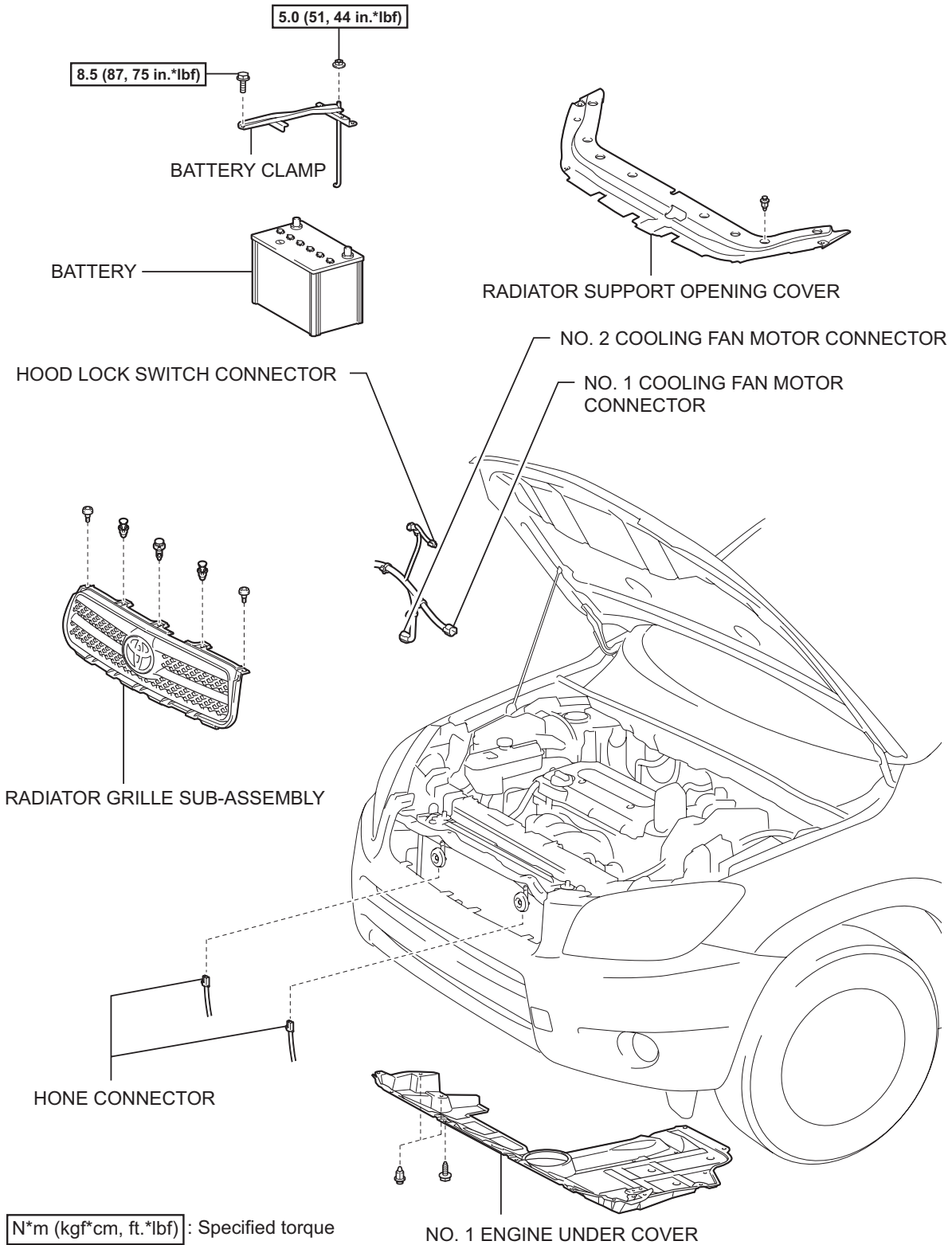
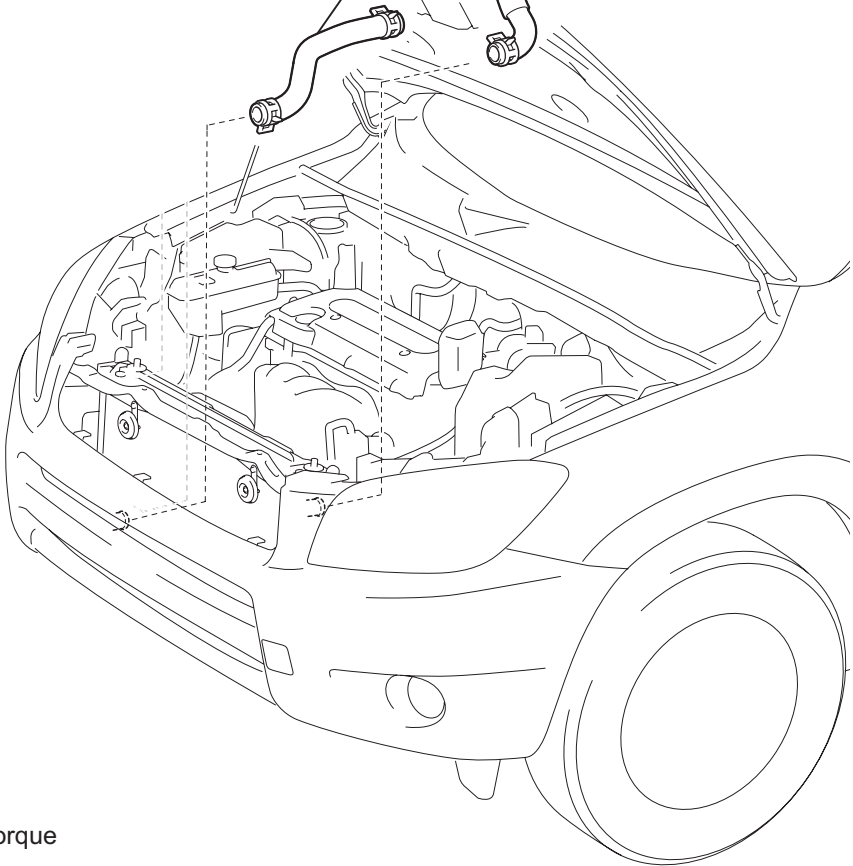
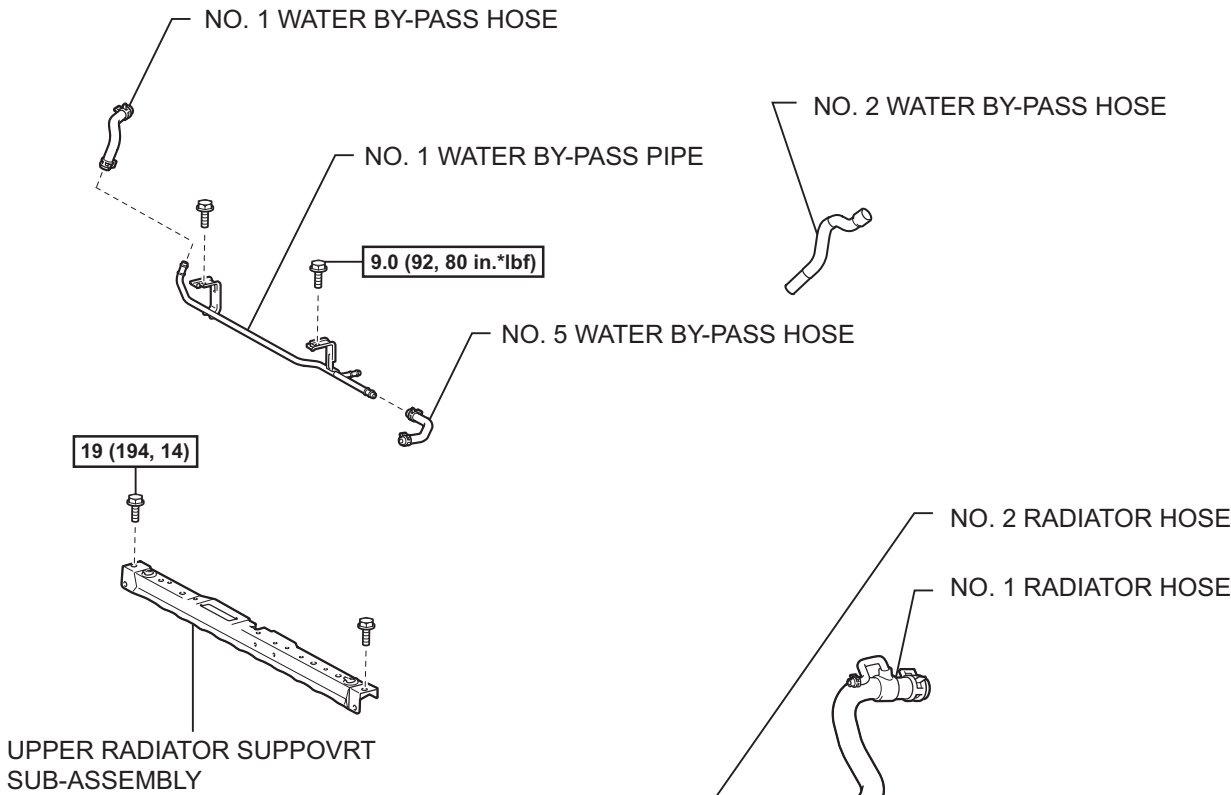


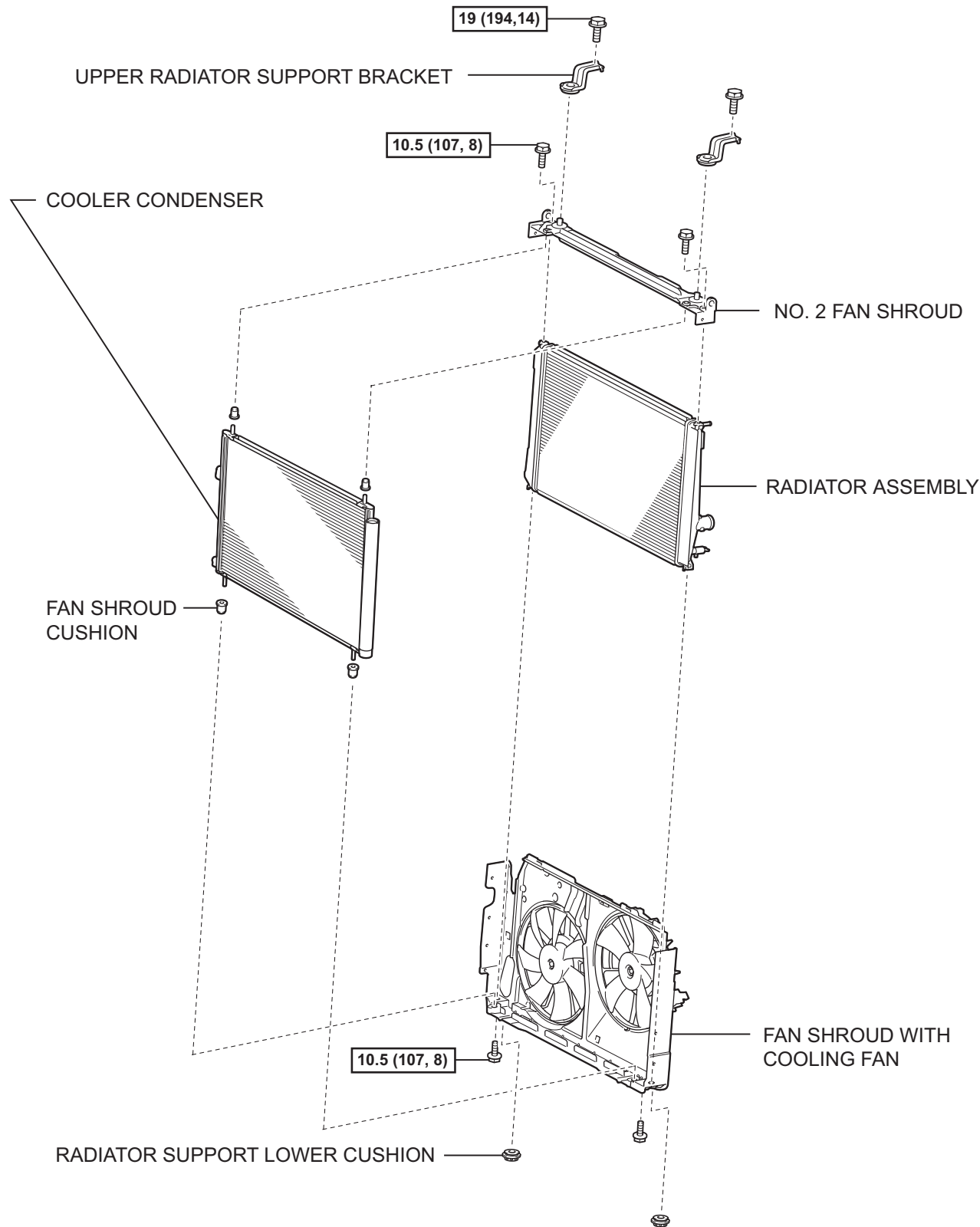
RADIATOR

COMPONENTS



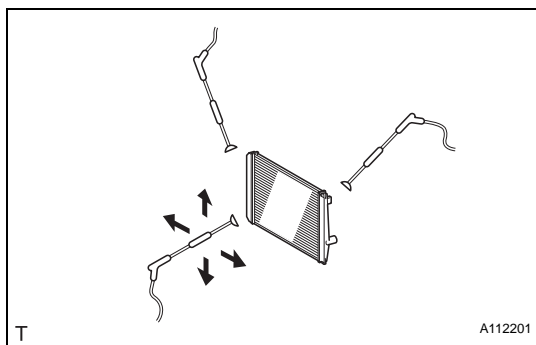
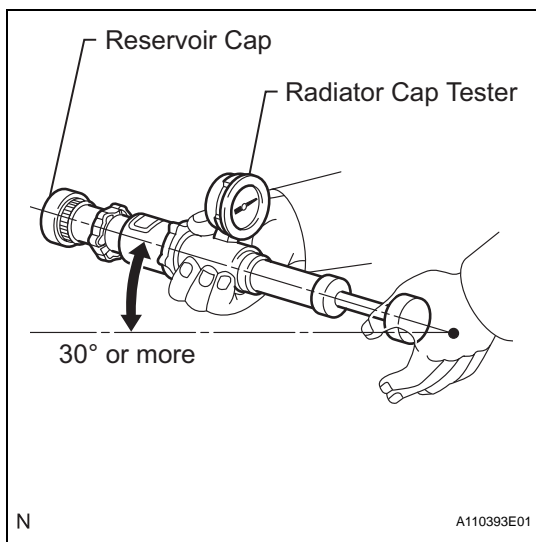
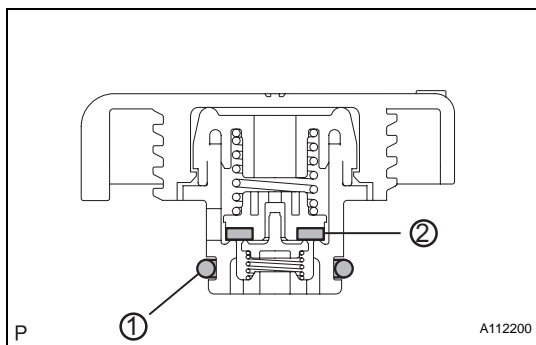


N*m (kgf*cm, ft.*lbf) : Specified torque



N*m (kgf*cm, ft.*lbf) : Specified torque

CO



ON-VEHICLE INSPECTION

1. CHECK RADIATOR RESERVOIR CAP SUB-ASSEMBLY

- (a) Measure the valve opening pressure.
 - (1) If there are water stains or foreign matter on O-ring 1, clean it with water and finger scouring.
 - (2) Check that O-ring 1 is not deformed, cracked or swollen.
 - (3) Apply engine coolant to O-ring 1 and rubber packing 2 before using a radiator cap tester.
 - (4) When using the cap tester, tilt it more than 30 degrees.
 - (5) Pump the cap tester several times, and check the maximum pressure*.

Pump speed:

1 pump per second

*: Even if the cap cannot maintain the maximum pressure, it is not a defect.

Judgment criterion

Item	Specified Condition
Standard value (for brand-new cap)	93.3 to 122.7 kPa (0.95 to 1.25 kgf/cm ² , 13.5 to 17.8 psi)
Minimum standard value (after using cap)	78.5 kPa (0.8 kgf/cm ² , 11.4 psi)

If the maximum pressure is less than the minimum standard value, replace the radiator reservoir cap sub-assembly.

ON-VEHICLE CLEANING

1. INSPECT RADIATOR ASSEMBLY

- (a) Check that the radiator and condenser are not blocked with leaves, dirt, or insects. Clean the hose connections.
If the fins are blocked, wash them with water or a steam cleaner.

NOTICE:

- If the distance between the steam cleaner and core is too close, the fins may be damaged.
- Keep the following injection distance.

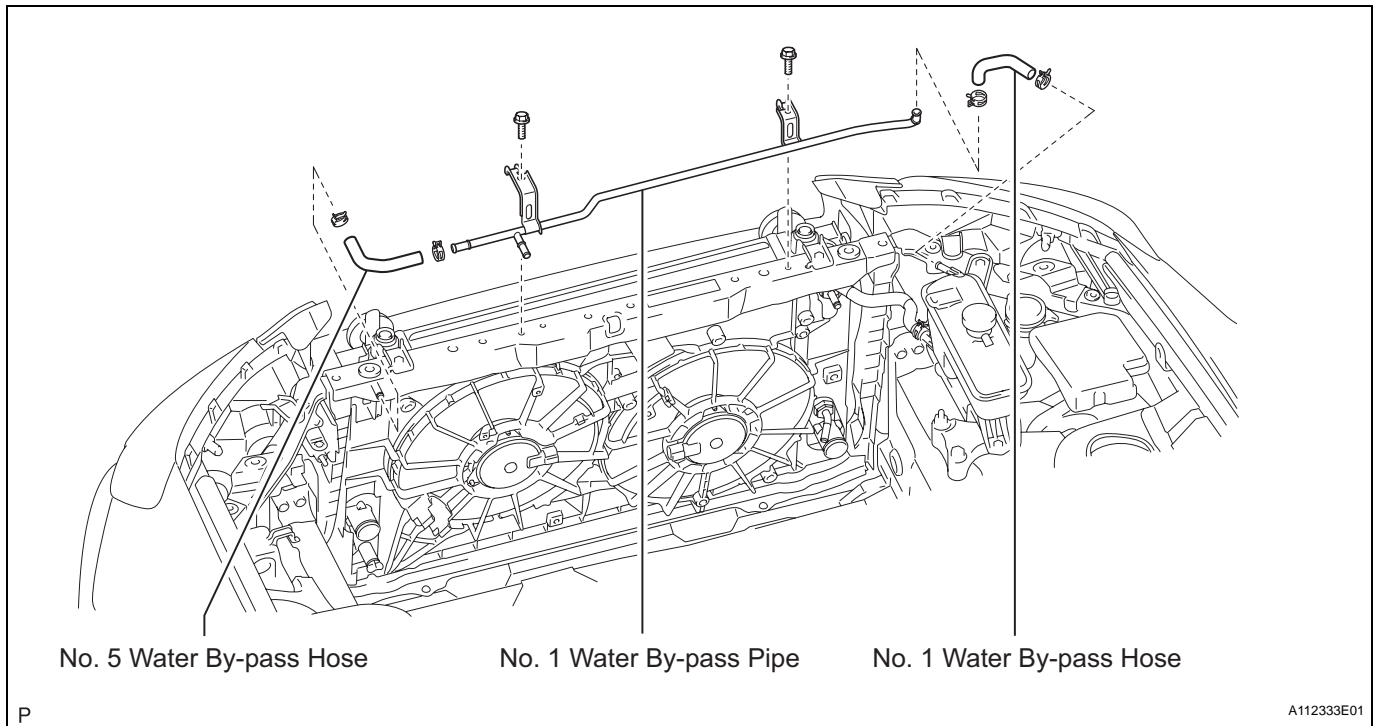
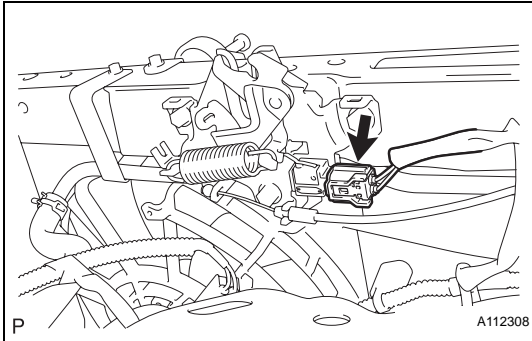
Standard injection distance

Injection Pressure	Specified Condition
2,942 to 4,903 kPa (30 to 50 kgf/cm ² , 427 to 711 psi)	300 mm (11.81 in.)
4,903 to 7,845 kPa (50 to 80 kgf/cm ² , 711 to 1,138 psi)	500 mm (19.69 in.)

- If the fins are bent, straighten them with a screwdriver or pliers.
 - Never apply water directly onto the electronic components.
- (b) Dry the fins with compressed air.

REMOVAL

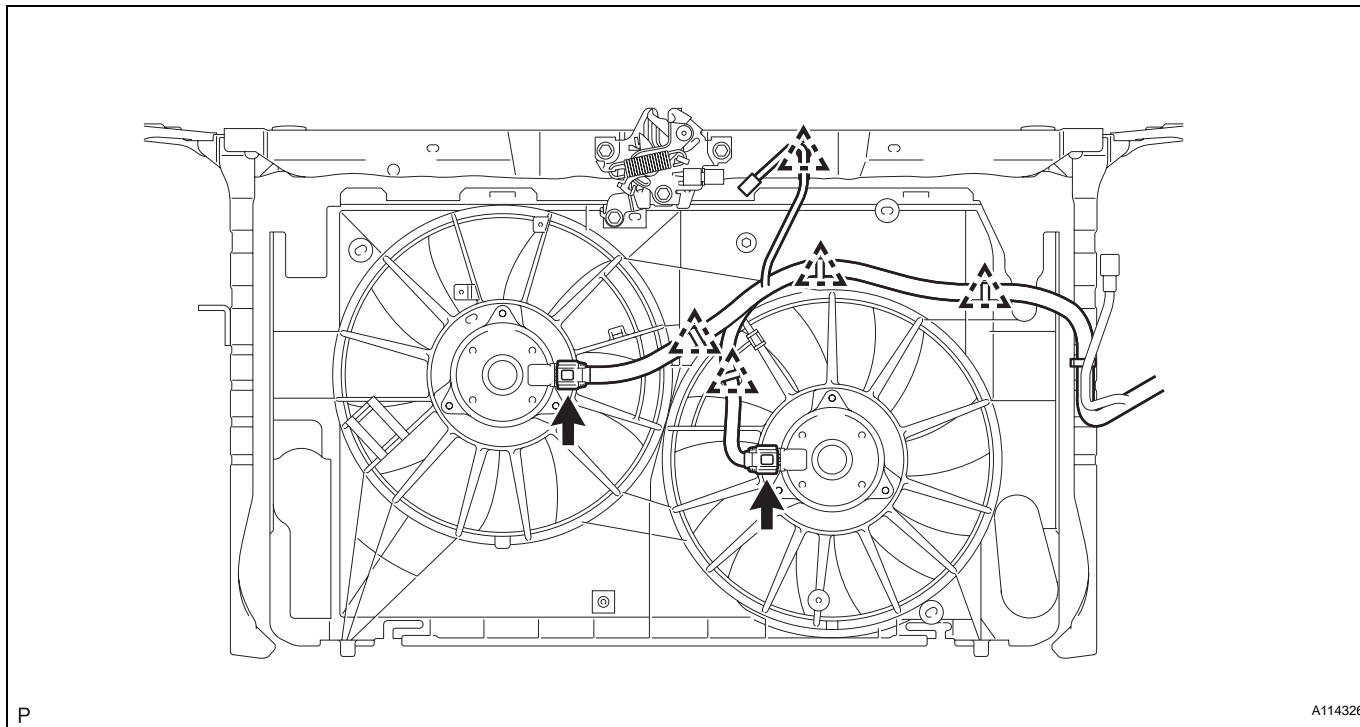
1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
CAUTION:
 Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.
2. **REMOVE RADIATOR SUPPORT OPENING COVER**
3. **REMOVE BATTERY CLAMP**
 (a) Remove the bolt, nut and clamp.
4. **REMOVE BATTERY**
5. **REMOVE NO. 1 ENGINE UNDER COVER**
6. **DRAIN ENGINE COOLANT** (See page [CO-6](#))
7. **REMOVE RADIATOR GRILLE SUB-ASSEMBLY** (See page [ET-6](#))
8. **DISCONNECT HOOD LOCK SWITCH CONNECTOR**
9. **DISCONNECT NO. 1 WATER BY-PASS HOSE**
 (a) Disconnect the hose from the radiator reservoir.
10. **DISCONNECT NO. 5 WATER BY-PASS HOSE**
 (a) Disconnect the hose from the radiator.
11. **REMOVE NO. 1 WATER BY-PASS PIPE**
 (a) Disconnect the pipe from the No. 1 radiator hose.
 (b) Remove the 2 bolts and the pipe.



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12. **DISCONNECT COOLING FAN MOTOR HARNESS**
 (a) Disconnect the 2 fan motor connectors from the 2 fan motors.

- (b) Detach the 5 harness clamps from the fan shroud and upper radiator support.

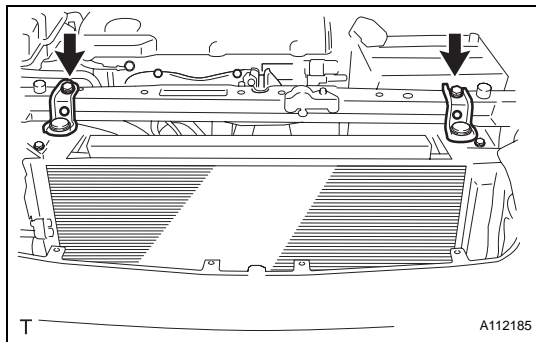


13. DISCONNECT HORN CONNECTOR

- (a) Disconnect the 2 horn connectors.

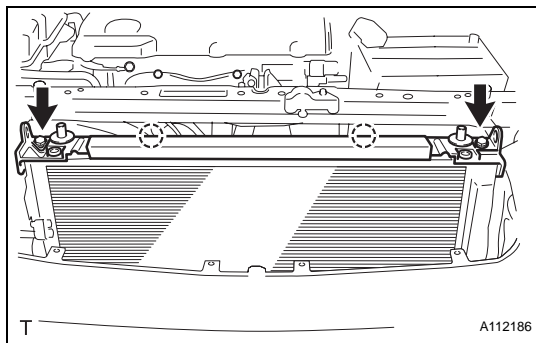
14. REMOVE UPPER RADIATOR SUPPORT BRACKET

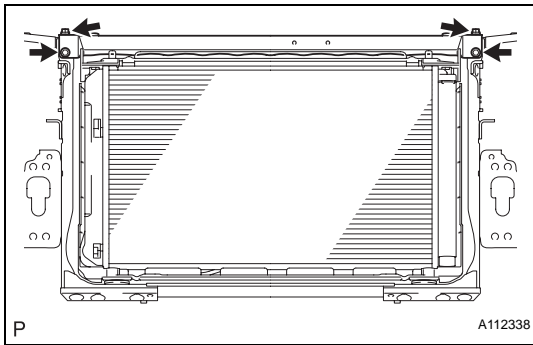
- (a) Remove the 2 bolts and the 2 upper radiator support brackets.



15. REMOVE NO. 2 FAN SHROUD

- (a) Remove the 2 bolts.
(b) Detach the 2 claws and No. 2 shroud.





16. REMOVE UPPER RADIATOR SUPPORT SUB-ASSEMBLY

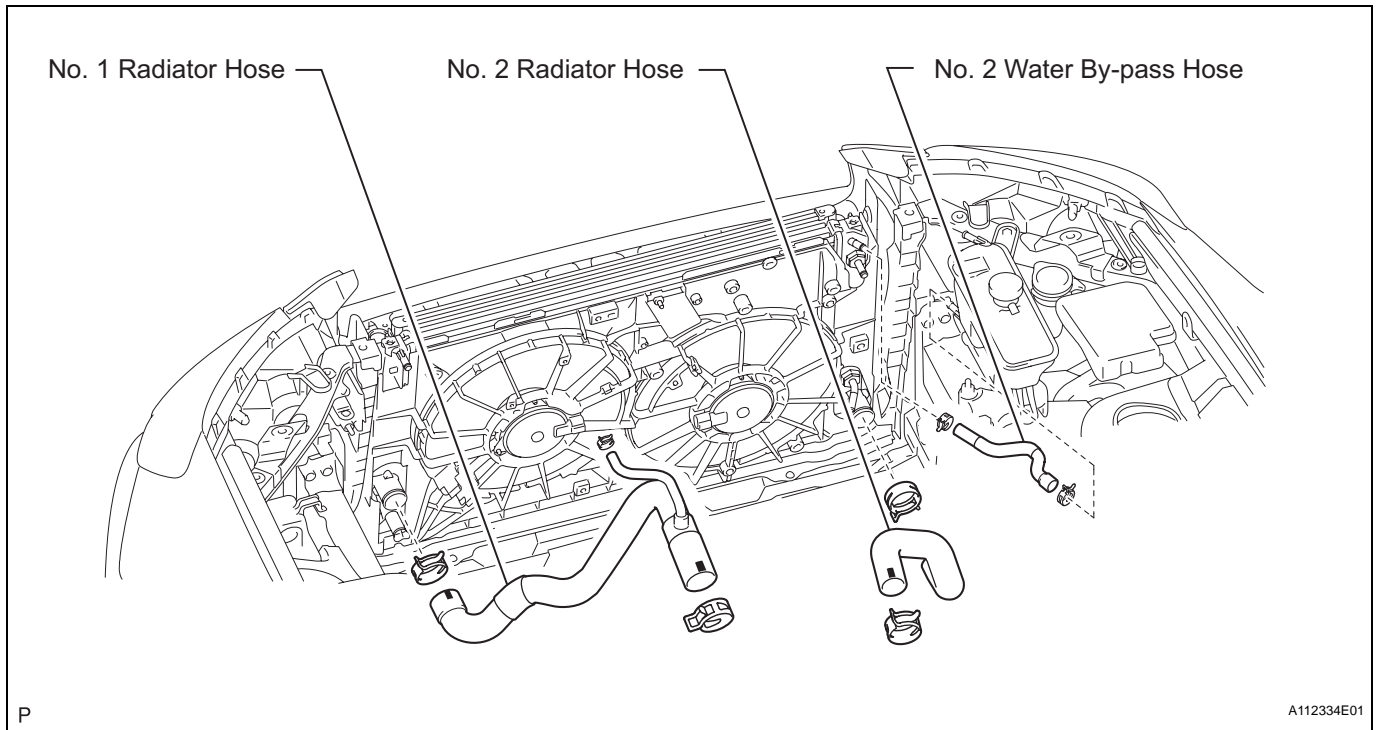
- (a) Remove the 4 bolts and upper radiator support with hood lock.

17. DISCONNECT NO. 1 RADIATOR HOSE

18. DISCONNECT NO. 2 RADIATOR HOSE

19. DISCONNECT NO. 2 WATER BY-PASS HOSE

- Disconnect the by-pass hose from the radiator reservoir and radiator.



20. REMOVE RADIATOR ASSEMBLY

- (a) Separate the cooler condenser from the radiator.

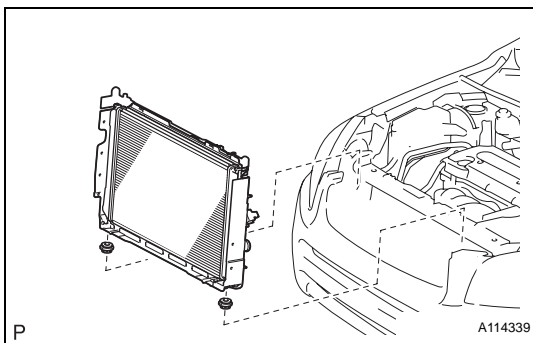
HINT:

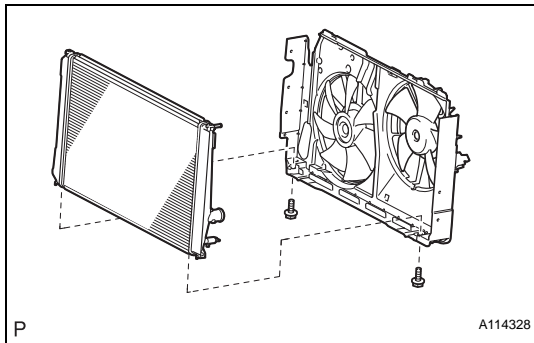
After detaching the condenser, make sure that all 4 fan shroud cushions are present.

- (b) Remove the radiator with the 2 radiator support lowers.

HINT:

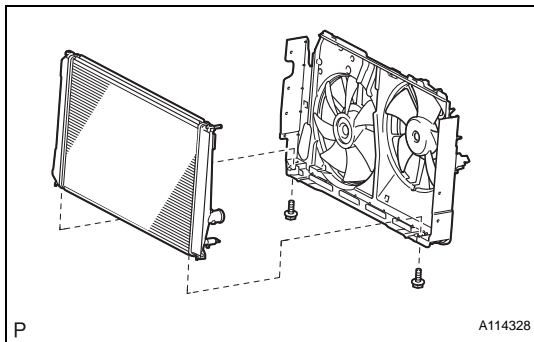
After detaching the radiator, make sure that both radiator support lowers are present.





21. REMOVE FAN SHROUD WITH COOLING FAN

- (a) Remove the 2 bolts and radiator from the fan shroud.



INSTALLATION

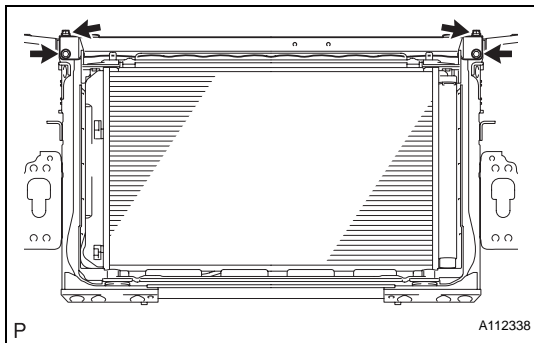
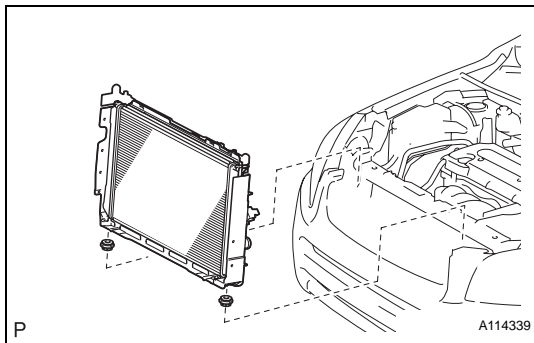
1. INSTALL FAN SHROUD WITH COOLING FAN

- (a) Install the fan shroud with cooling fan with the 2 bolts to the radiator.

Torque: 10.5 N*m (107 kgf*cm, 8 ft.*lbf)

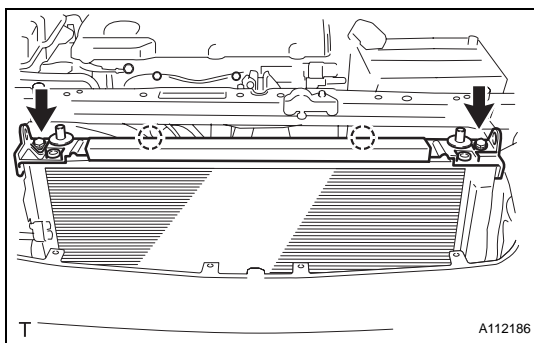
2. INSTALL RADIATOR ASSEMBLY

- (a) Install the 4 fan shroud cushions to the cooler condenser.
 (b) Set the cooler condenser to the fan shroud.
 (c) Install the 2 radiator support lower cushions to the fan shroud.
 (d) Install the radiator with cooler condenser and fan shroud to the radiator support lower.



3. INSTALL UPPER RADIATOR SUPPORT SUB-ASSEMBLY

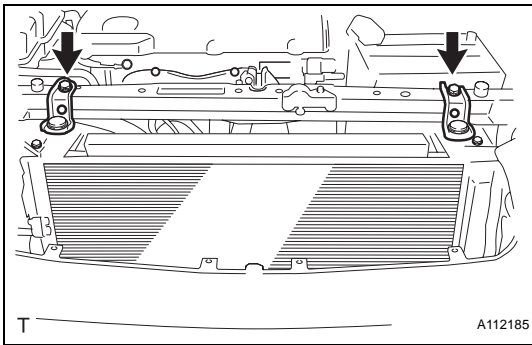
- (a) Install the upper radiator support with the 4 bolts.
Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf)



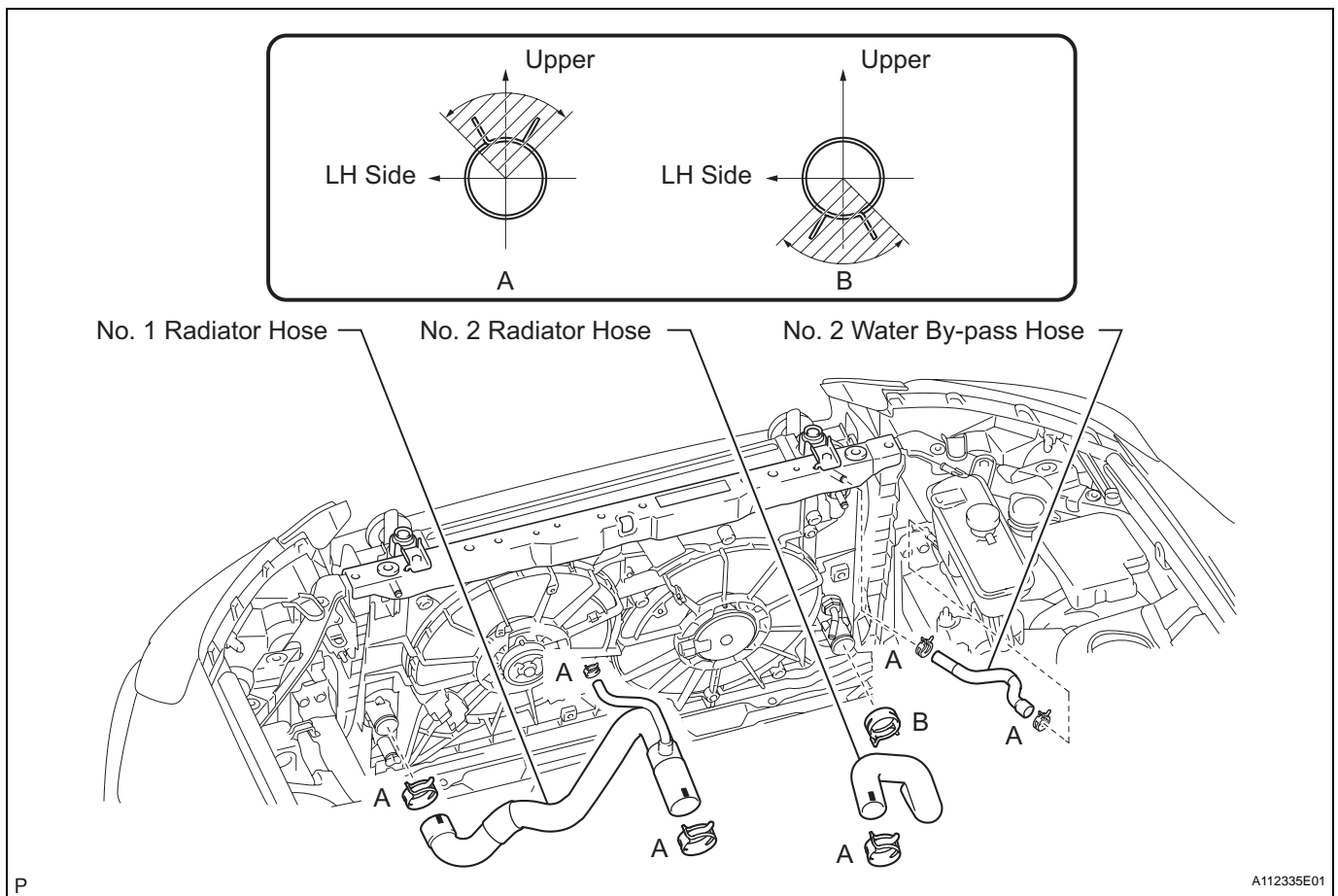
4. INSTALL NO. 2 FAN SHROUD

- (a) Attach the 2 claws to install the No. 2 fan shroud and install the 2 bolts.

Torque: 10.5 N*m (107 kgf*cm, 8 ft.*lbf)

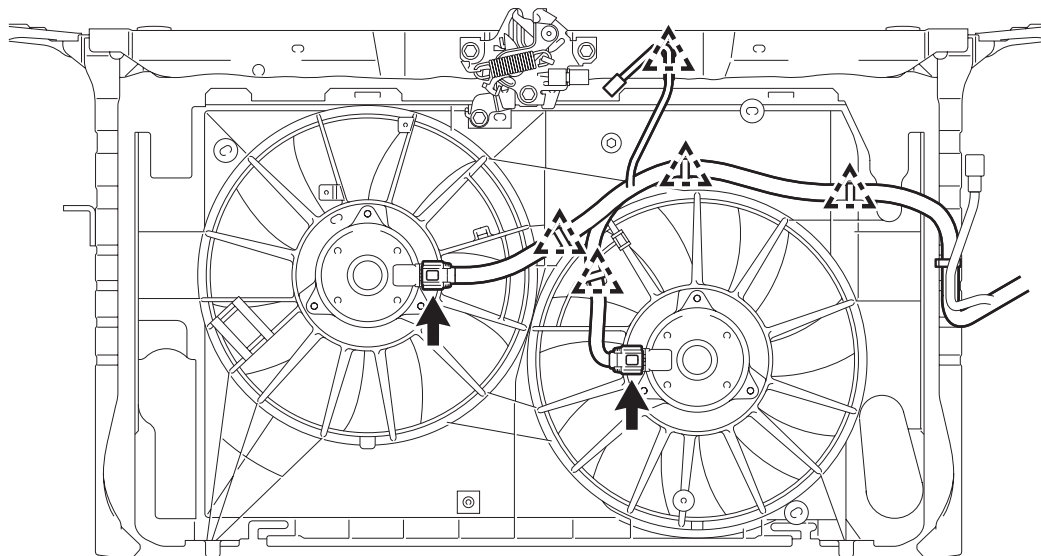


5. **INSTALL UPPER RADIATOR SUPPORT BRACKET**
 - (a) Install the bracket with the 2 bolts.
Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf)
6. **CONNECT HORN CONNECTOR**
 - (a) Connect the 2 horn connectors.
7. **CONNECT NO. 2 WATER BY-PASS HOSE**
 - (a) Connect the by-pass hose to the radiator and radiator reservoir.
HINT:
The direction of the hose clamp is indicated in the illustration.
8. **CONNECT NO. 2 RADIATOR HOSE**
 - HINT:
The direction of the hose clamp is indicated in the illustration.
9. **CONNECT NO. 1 RADIATOR HOSE**
 - HINT:
The direction of the hose clamp is indicated in the illustration.



10. **CONNECT COOLING FAN MOTOR HARNESS**
 - (a) Attach the harness with the 5 clamps.

- (b) Connect the 2 fan motor connectors.



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11. INSTALL NO. 1 WATER BY-PASS PIPE

- (a) Install the by-pass pipe with the 2 bolts to the upper radiator support.

Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)

- (b) Connect the No. 1 radiator hose to the pipe.

HINT:

The direction of the hose clamp is indicated in the illustration.

12. CONNECT NO. 5 WATER BY-PASS HOSE

- (a) Connect the by-pass hose to the radiator.

HINT:

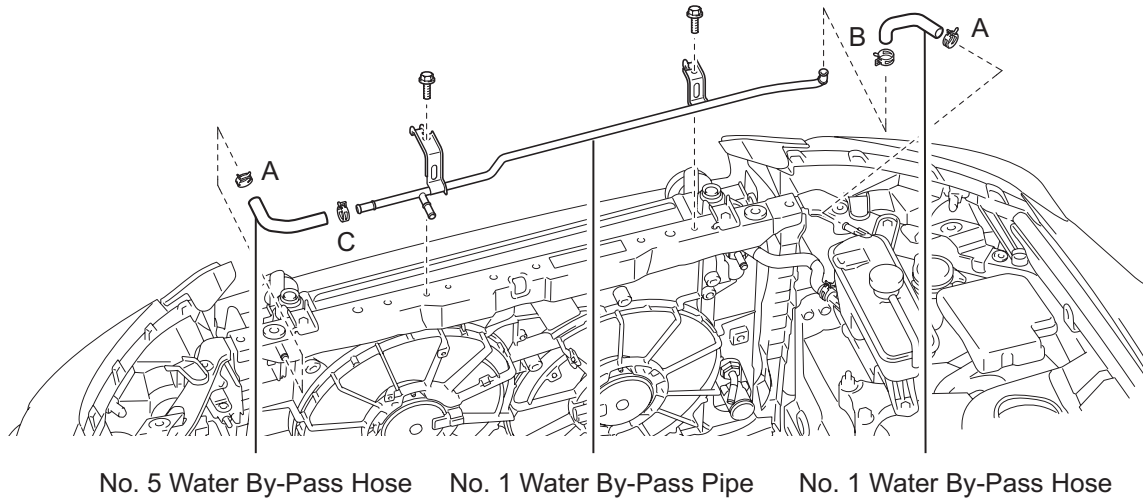
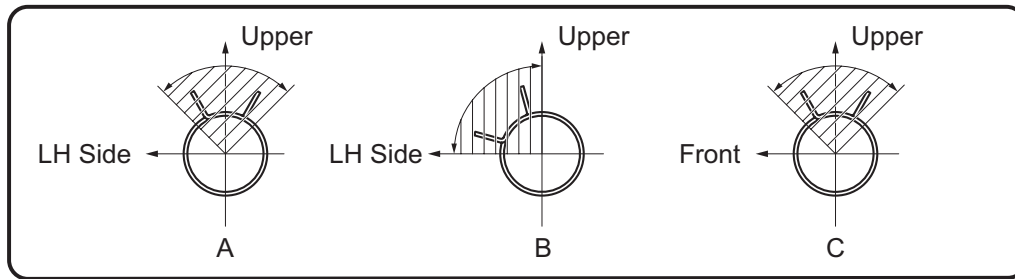
The direction of the hose clamp is indicated in the illustration.

13. CONNECT NO. 1 WATER BY-PASS HOSE

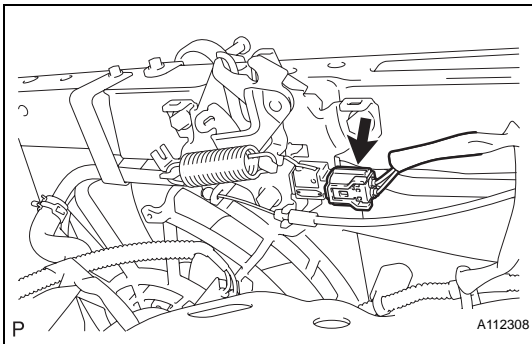
- (a) Connect the by-pass hose to the radiator and radiator reservoir.

HINT:

The direction of the hose clamp is indicated in the illustration.



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**14. CONNECT HOOD LOCK SWITCH CONNECTOR****15. INSTALL RADIATOR GRILLE SUB-ASSEMBLY (See page [ET-10](#))****16. INSTALL BATTERY****17. INSTALL BATTERY CLAMP**

- (a) Attach the hook of the battery clamp to the battery bracket.
- (b) Temporarily tighten the nut and install the bolt.
- (c) Adjust the battery clamp's position.
- (d) Fully tighten the bolt and nut.

Torque: 8.5 N*m (87 kgf*cm, 75 in.*lbf) for bolt
5.0 N*m (51 kgf*cm, 44 in.*lbf) for nut

18. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**19. ADD ENGINE COOLANT (See page [CO-6](#))****20. CHECK FOR ENGINE COOLANT LEAKS (See page [CO-1](#))****21. INSTALL RADIATOR SUPPORT OPENING COVER**